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ABSTRACT

In 1990, Kent-Meridian High School in Kent, Washington, decided to implement four schools within schools, each with its separate academic and career focus. The first section of this paper outlines the 3-year evaluation plan for the Health/Science School (1992-1995), with a focus on identifying program outcomes and developing assessment measures. The second section describes the Health/Science School's first-year outcomes, which include: the development of an integrated curriculum, cooperative learning, flexible scheduling, cohort learning, teacher cooperation, alternative assessment strategies, and the direct application of learning to life situations. Data were obtained through: (1) teacher interviews, student essays, and parent surveys; and (2) a comparison of the 70 Health/Science students with a random sample of 76 "regular" students on six academic variables and student behavior records. Findings indicate that the Health/Science school was successful in providing an educational environment with high levels of innovation, teacher support, and student cooperation. Although the program did not result in higher grades, Health/Science students demonstrated substantial improvement in their writing abilities and had fewer absences and discipline referrals than the comparison group. Teachers, parents, and students expressed general satisfaction with the program. Recommendations are made regarding planning and curriculum development, leadership, and program expectations. Four tables are included. Appendices contain a classroom environment profile and descriptions, and characteristics of successful program implementation. (LP)

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ED 370 195

A SCHOOL WITHIN A SCHOOL:

EVALUATION RESULTS OF THE FIRST YEAR OF A

RESTRUCTURING EFFORT

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January, 1994

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Introduction

In 1990 Kent-Meridian High School, Kent, Washington, began a school restructuring effort. After considerable study it was their decision to develop four *schools within schools*, each with a separate academic and career focus. The first school, the Health/Science School, was begun with seventy students in the Autumn of 1992. The restructuring effort continued and a second school (International Business and Global Studies) was begun in the Autumn of 1993. Plans call for the implementation of the remaining two schools in the Autumn of 1994. With funding provided by the Boeing Corporation, the school was able to incorporate program evaluation into the restructuring efforts.

This document is divided into two sections. The first section is a description of the three year evaluation plan for the Health/Science School. The second section is a report on the outcomes of the first year of implementation.

EVALUATION PLAN
KENT-MERIDIAN HIGH SCHOOL
HEALTH / SCIENCE SCHOOL

This evaluation plan is for the Health/Science School at Kent-Meridian High School for the school years 1992-93, 1993-94, and 1994-95. It has been designed with participation of the faculty and administration of the Health Science School. The plan calls for formative and summative evaluation of the program each year, with interim reports to be prepared at the end of the 1992-93 and 1993-94 school years, and a summative evaluation report to be completed in the summer of 1995. The design of the evaluation requires a control group of students for comparison to the students in the Health/Science School using quantitative information (hard data). In addition, qualitative information (soft data) will be used for the further evaluation of specific academic, affective, and attitudinal outcomes in the Health/Science School.

I. PROGRAM OUTCOMES

The school and community personnel involved with the Health/Science School have identified the following general goal for the program:

> "Our goal is to provide an educational experience that makes connections among different academic subjects, emphasizes performance rather than knowledge, and prepares students to go to work or to further education and then to work after they graduate from high school."

The overt and primary goal of this program focuses on the student. However, since school programs are part of a larger system and cannot operate without having an impact on others within the system, it is necessary to consider its effect on two other important groups: teachers and parents. Developing positive relations and attitudes with parents, and with those implementing the program, teachers, are important goals of all educational programs.

The specific educational outcomes identified by the participants are perceived to be measures of the degree to which these ends can be assessed. Because of the nature of the primary program goal, it is therefore necessary to include both traditional academic measures of success, such as test scores and grade point averages, but also a number of outcomes which can only be assessed using a variety of qualitative measures. For example, no known "test" is adequate to measure a student's ability to make connections among different academic subjects. Therefore, indirect measures of this ability must be used, such as observing a student using a new problem solving approach in a variety of subject areas, or by questioning the student directly about the relationships of various subjects. Similarly, assessing a student's preparedness for college or the work world may best be accomplished by not only looking at test scores, but also by interviewing the student and parent(s) about attitudes and perceptions of further schooling or work.

As measures of the attainment of the primary program goal and the program affects on parents and teachers, this evaluation plan focuses on the following outcomes:

Students

Academic:

1. Test scores (Test)
2. Grade point averages (GPA)
3. Writing ability (Writing)
4. Problem solving ability (Prob)
5. Communication skills (Comm)

Affective (Attitudes):

1. Attitude toward the educational environment (Environ)
2. Attitude toward specific subjects (Subj)

Other:

1. Graduation rates (Grad)
2. Absentee rates (Absent)
3. Discipline referrals (Referral)

Parents

1. Parent perceptions of student attitudes toward the program and school (Par/Percp)
2. Parent attitude toward the program (Par/Att)
3. Parental involvement in the program (Par/Inv)

Teachers

1. Attitude toward their job (Tch/Job)
2. Attitude toward the program (Tch/Prg)

** NOTE: *The abbreviated form in parentheses () designates its usage throughout this document.*

II. MEASURES, DESIGN AND RESPONSIBILITIES

Measures

The program outcomes will be measured by the following methods.

Outcomes	*Measures*
Test	CTBS
GPA	Student GPA's for each year
Writing	Student writing samples
	Teacher observations
Prob	To be decided
Comm	To be decided
Environ	Classroom Environment Scale
Subj	Estes Attitude Scale
Grad	1995 graduation rate
Absent	Yearly absentee rates
Referral	Yearly disciplinary referrals
Par/Percp	Parent questionnaire to be developed
	Parent interviews
Par/Att	Parent questionnaire to be developed
	Parent interviews
Par/Inv	Teacher tracking of participation
Tch/Job	Teacher Attitude Scale
Tch/Prg	Teacher journals and interviews

Design

The large number of program outcomes and the three year duration of the program allows for the incremental assessment of the outcomes. In addition, it is believed that formative evaluation throughout the first year and continued faculty development will strengthen various components of the program implementation. For example, as teachers develop a clearer conceptual understanding of and agreement on the integrated curricula and resulting teaching strategies, teacher assessment of writing, problem solving, and communication skills will be altered. Consequently, during the first year several outcomes will be measured only through informal teacher observations, with refinement of the measures during the second and third year.

For certain outcomes, the proposed evaluation design requires a control group for the comparison of the students in the Health/Science School to students in regular programming. This plan proposes two implementation schedules. Option 1 implementation schedule for program outcomes and evaluation would follow this schedule.

		Year 1	Year 2	Year 3	Control group required
	Outcomes				
1.	Test	X	X	X	X
2.	GPA	X	X	X	X
3.	Writing	X	X	X	
4.	Absent	X	X	X	X
5.	Referral	X	X	X	X
6.	Tch/Prg	X	X	X	X
- - - - - - - - - -					
7.	Environ		X	X	X
8.	Par/Inv		X	X	
9.	Par/Att		X	X	
10.	Par/Percp		X	X	
- - - - - - - - - -					
11.	Subj		X	X	X
12.	Tch/Job		X	X	X
13.	Prob			X	
14.	Comm			X	
15.	Grad			X	X

Option 2 would move outcomes 7-10 to year 1 and would provide a more complete picture of the program's strengths and weaknesses, but would be more costly. This option is discussed further in the Recommendations section.

Responsibilities

Formative and summative evaluation activities will involve both the consultant and the personnel involved with the Health/Science School. Year 1 responsibilities, tasks and time frame are shown below.

Responsibilities for Year 1

	Outcomes	*Person(s) Responsible*	*Tasks*	*Time Frame*
1.	Test	Don	identify control group, compile scores	Dec 1
2.	GPA	Tad, Pat	identify control group, obtain H/SS student GPA, compile results	end of year
3.	Writing	Kay	identify types of writing to be collected, guidelines to teachers, evaluation criteria, summarize results	Nov 1 May 1 June 1
4.	Absent	Tad, Pat	identify control group, obtain H/SS student GPA, compile results	end of year
5.	Referral	Tom	identify control group, collect data, summarize results	end of year
6.	Tch/Prg	Robin, Heidi	develop questionnaire/ interview questions, collect data, summarize results	Spring end of year

(Option 2)

	Outcomes	*Person(s) Responsible*	*Tasks*	*Time Frame*
7.	Environ	Chuck, Fouts	identify control group. administer and score CES. summarize results	Winter Spring
	- -			
8.	Par/Inv	Eric, Marty	develop definition of involvement. record parental involvement. summarize results	Nov. 1 end of year
	- -			
9. 10.	Par/Att Par/Percp	Eric, Marty, Fouts	develop questionnaire/ interview questions. assess parents. summarize results	Spring June 1

A first year interim evaluation report will be written by the consultant by August 1, 1993. The report will include a program description, a summary of the year's activities, a summary of the results from the measures mentioned above, and recommendations for the following year.

EVALUATION REPORT FOR YEAR 1 (1992-1993)

THE HEALTH SCIENCES SCHOOL

KENT-MERIDIAN HIGH SCHOOL

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July 23, 1993

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EXECUTIVE SUMMARY

This report focuses on the results of the first year (1992-93) of the Health Science School. The intent of this program is to provide an alternative educational experience to students. The Health Science School approach focuses on an integrated curriculum, cooperative learning, the direct application of learning to life situations, flexible scheduling, cohort learning, teacher cooperation and communication, and alternative assessment strategies. Based on GPA, writing sample scores, and test scores, the Health Science students are slightly above, yet still fairly representative of, Kent-Meridian students in general.

For the first year of the program there are three specific findings.

1. Program Implementation (p. 9) -- The Health Science School has been successful in providing an alternative educational program apart from the traditional experience at Kent-Meridian High School. The program was particularly successful in providing an educational environment high on innovation, teacher support, and student cooperation and affiliation, while using an integrated curriculum and tied to a community professional area. Teachers tried many new and different teaching strategies, schedules, and outside of class activities. At this stage of the project the Health Science School has demonstrated that the high school educational experience can be restructured to provide a very different type of education.

2. Educational Outcomes (p.11) -- Participation in the Health Science School did not result in higher grades for students. However student writing samples indicate that the Health Science students did enhance their writing ability substantially. Health Science students had 49% fewer all day absences and 26% fewer single class period absences than did the comparison group. Discipline referrals to the school disciplinarians were down 71% and referrals to the counselor were down 61%. The need for suspensions and Saturday School was all but eliminated. Seventy-one percent of the students had some degree of observable parent participation in their education.

3. Participant Attitudes (p. 14) -- The program generally received high marks from the participants. Teachers continue to believe that it is the direction for education to go and were generally satisfied in the program's progress. A very large percentage of the limited number of parents who responded were complimentary of the program, with 94% of the respondents saying they would recommend the program to others, and 88% saying that if given the choice over again, they would choose to put their child into the program. Students also seemed satisfied with the year and the program. There are major concerns about the program, however, particularly in the areas of resources for planning and staff development, communication, leadership, and district commitment.

Recommendations to the Kent-Meridian/Kent School District Administration: (p. 18)

1. A clear signal should be sent to the Health Science faculty, and to the rest of the faculty at Kent-Meridian High School, that there is a continuing district and administrative commitment to the restructuring efforts, if this is indeed the plan.

2. Resources at the 1992-93 year level are necessary as a minimum. The program doubles in size during the next year, with a whole new group of teachers and students. It is not realistic to expect the program to succeed as it did this year without ample time for planning and curriculum development.

3. The leadership question of the Health Science School for 1993-94 must be resolved at the earliest possible date. A major reason for the success of the program this year was the strong leadership provided by the assistant principal. Without such leadership for the coming year, the program is in jeopardy. Even with the commitment of other resources, the program will struggle without strong leadership.

Recommendations to the Health Science School Faculty: (p. 19)

1. Curriculum development, the continued development of the integrated model, and the staff development of the new faculty in the School for the 1993-94 year should begin immediately. During the Summer of 1993 both the existing and new faculty should evaluate which classroom and curricular practices were successful and which need revision.

2. The faculty must work at clarifying course outcomes, expectations, and timelines for students and communicate those clearly.

3. The faculty should continue the strong efforts at parent involvement.

4. The program evaluation efforts should continue and be expanded to include a satisfactory comparison group of students for writing samples, student attitude assessment toward subjects, and teacher attitude assessment toward their jobs.

INTRODUCTION

The evaluation plan for the Health Science School at Kent-Meridian High School employs process and product evaluations for the school years 1992-93, 1993-94, and 1994-95. The plan was designed with participation of the faculty and administration of the Health Science School. Interim reports are to be prepared at the end of the 1992-93 and 1993-94 school years, and a summative evaluation report to be completed in the summer of 1995. The design of the evaluation uses quantitative information (hard data) and qualitative information (soft data) for the evaluation of specific academic, affective, and attitudinal outcomes in the Health Science School.

The school and community personnel involved with the Health Science School identified the following general goal for the program:

> "Our goal is to provide an educational experience that makes connections among different academic subjects, emphasizes performance rather than knowledge, and prepares students to go to work or to further education and then to work after they graduate from high school."

The overt and primary goal of this program focuses on the student. However, since school programs are part of a larger system and cannot operate without having an impact on others within the system, it is necessary to consider its affect on two other important groups: teachers and parents. Developing positive relations and attitudes with parents, and with those implementing the program, teachers, are important goals of all educational programs.

The specific educational outcomes identified by the participants are perceived to be measures of the degree to which these ends can be assessed. Because of the nature of the primary program goal, it is therefore necessary to include both traditional academic measures of success, such as test scores and grade point averages, but also a number of outcomes which can only be assessed using a variety of qualitative measures. For example, no known "test" is adequate to measure a student's ability to make connections among different academic subjects. Therefore, indirect measures of this ability must be used, such as observing a student using a new problem solving approach in a variety of subject areas, or by questioning the student directly about the relationships of various subjects. Similarly, assessing a student's preparedness for college or the work world may best be accomplished by not only looking at test scores, but also by interviewing the student and parent(s) about attitudes and perceptions of further schooling or work.

This report focuses on the results of the first year (1992-93) of the Health Science School. As a measure of the attainment of the primary program goal and the program affects on parents and teachers, this evaluation focuses on a limited number of outcomes for this first year of the program. Additional outcomes and measures will be added to the evaluation in the succeeding years.

Research Questions

In this first year of the program, the evaluation focused on the following research questions:

1. To what degree has the program been successful in implementing the designated educational program and providing an alternative educational experience to the traditional program at Kent-Meridian High School?

2. How has the Health Science School affected typical educational outcomes and student behaviors?

3. How do the various groups (teachers, students, parents) perceive the program?

Participants in the Programs

Throughout the evaluation process in this first year, data were collected from Health Science students, teachers and parents, and from a comparison group of students in the regular tenth grade school program. Any evaluation of student outcomes in a special program necessitates a comparison group of students to use as a standard. Students in the Health Science School were self-selected, and since participation was not mandatory there is a degree to which the participants in the program were not truly representative of the rest of the student body. This is an inherent weakness in evaluation research, and relegates the research design to a causal-comparative model rather than experimental or quasi-experimental. Nonetheless, a comparison group can be used as a yardstick, with the recognition that the design is less than ideal and that the results must be interpreted with this design weakness in mind.

To determine the extent to which the Health Science students were representative of the general tenth grade population, a comparison group of tenth grade students was selected at random (n=76) from the regular education program. The two groups of students were compared on six academic variables: Ninth grade GPA, writing sample score (September, 1992), and Autumn, 1992, CAT Total Reading, Total Language, Total Math, and Total Battery scores. These data are presented in Table 1.

Table 1
Health Science Students and Comparison Group Scores on Six Academic Variables

Academic Variable	Health Science Students		Other 10th Graders	
Ninth Grade GPA	2.88		2.61	
September Writing Sample	9.56		9.3	
CAT	NCE	%ile	NCE	%ile
Total Reading	60	68	55	59
Total Language	59	67	54	58
Total Math	60	68	56	61
Total Battery	61	70	56	61

**Note: NCE scores are nationally normed with a mean of 50 and a standard deviation of 21.

Students in the Health Science School did have higher ninth grade GPA scores than did the students in the comparison group, resulting in an effect size of .32, which in practical terms is a small difference. On the California Achievement Test the Health Science students are slightly above the average of the comparison group of tenth graders at Kent-Meridian. In statistical terms the differences are small, ranging in effect sizes from .19 to .23. In practical terms it is appropriate to say that the Health Science students are slightly above the students in the comparison group, but the difference is small. Similarly, the September writing sample results show a very slight tendency for the Health Science students to score higher, but this difference is not statistically significant.

Based on the GPA scores, writing sample scores, and test scores, the Health Science students are slightly above, yet still fairly representative of Kent-Meridian students in general as represented by this comparison group.

YEAR 1 RESULTS

Question 1 -- To what degree has the program been successful in implementing the designated educational program and providing an alternative educational experience to the traditional program at Kent-Meridian High School?

Sources of data

In November a consultant met with the faculty of the Health Science School to help develop a clearer model for the program, resulting in a concise document describing the Health Science School approach. Teachers were interviewed throughout the year about program implementation, with a final in-depth interview at the end of the school year. Students wrote an essay at the end of the year on their reflections of the program, and an analysis was conducted on those essays. Parents were given an end of the year questionnaire regarding their perceptions on the program.

In March and April a modified version of the Classroom Environment Scale (CES) was completed by both the Health Science students and the comparison group. The CES is a recognized research assessment measure of school and classroom climate. For the purposes of this evaluation the CES wording was modified slightly to reflect students' perceptions of their overall educational program, rather than a particular classroom. A description of the CES subscale scores in provided in the appendix (p. A-1).

Findings

The intent of this program is to provide an alternative educational experience to students. The Health Science School approach focuses on an integrated curriculum, cooperative learning, the direct application of learning to life situations, flexible scheduling, cohort learning, and alternative assessment strategies. Such an approach would differ considerably from what most students experience in high school when learning is segregated, courses are taken independent of each other, the environment is impersonal, and learning and assessment are traditional. When contrasting two such learning approaches student perceptions of their educational experiences and the learning environment should differ. The degree to which these facets of the Health Science program were actually implemented in the classrooms is reflected by the results of the CES.

A graphic illustration of the results of the CES is provided in the appendix (p. A-2). The results of the comparison group of students indicate that the climate of the school is quite similar to other high schools where the CES has been used. The low scores on the Involvement and Innovation scales are typical of most high school programs. Generally, the comparison group of students have a relatively low attentive interest in the classes and the teachers use traditional teaching strategies with little variety. The Health Science program produced unusually high scores in these areas, showing a great deal of

student involvement in the classes, with the teachers using new and diverse strategies and activities on a regular basis.

In addition, the results show that the Health Science students feel a great deal of group cohesion and work together to an unusual degree (Affiliation). At the same time there is a closeness between the students and teachers that is not felt between the regular program students and teachers (Teacher Support). While this more personalized approach is evident in these results, the Health Science School did not sacrifice classroom control or discipline. The Health Science School managed to maintain the focus of the classes on learning (Task Orientation), while being as orderly and organized (Order and Organization) as the traditional classes. In fact the Teacher Control scale indicates that this was accomplished with less teacher dominance of the classroom environment.

These findings were supported by the interviews with teachers, student year-end essay contents, and parent questionnaires. Many teachers reported that they had developed a closer relationship with the Health Science students than they had with any students at any point in their careers. They also reported that they had involved these students more in the planning of classroom activities and learning than ever before. Typical teacher comments about their perceptions of the program included:

> "For the first time in my teaching I feel free to take risks. I have the support of the other teachers to try something different."
>
> "It makes me want to do much more, use many different strategies, to explore the limits."
>
> "Kids are not trained in K-9 to take control of their own learning, now they must."
>
> "Health Science has given me a chance to try out other strategies with support from my colleagues."
>
> "My relations with the kids are 100 times better. It is very special."
>
> "These were typical kids coming in. Now we are more like a family."

In their end of the year essays, Health Science students wrote about the program and the differences they perceived in their education. Students talked openly and at length about learning to work in groups, making friendships with people in the Health Science program, and the diverse activities in which they participated. While most were positive about the program and a few were ambivalent, a common theme was the realization that they were part of something different, good or bad, and that they were experiencing an educational program not available to other students. The data in Table 3 (below) also indicate that the parents saw a change of attitude toward school on the part

of their child, indicating a new type of educational experience.

Summary and conclusions.

The Health Science School has been successful in providing an alternative educational program apart from the traditional experience at Kent-Meridian High School. The program was particularly successful in providing an educational environment high in innovation, teacher support, and student cooperation and affiliation, while using an integrated curriculum and tied to a community professional area. Teachers tried many new and different teaching strategies, schedules, and outside of class activities. At this stage of the project the Health Science School has demonstrated that the high school educational experience can be restructured to provide a very different type of education.

Question 2 -- How has the Health Science School affected typical educational outcomes and student behaviors?

Sources of data.

Grade point averages, disciplinary referrals, and absentee rates for the students in the Health Science School and the random sample of 76 students selected from the regular tenth grade program were calculated and compared. Writing samples from the beginning of the year and the end of the year were compared for the Health Science Students. A parental involvement record for school activities in the Health Science School was maintained.

Findings.

The grade point averages for the Health Science students and the sample of students from the regular program are presented in Table 2. The GPA of both groups of students declined from the ninth grade (see Table 1) to the first semester of the tenth grade by about the same amount. By the send of the second semester, the comparison group's GPA had risen slightly, while the Health Science students' continued to decline. These data show that participation in the Health Science School did not result in higher grades for the students, and may have meant a slight decline. However, these data must be interpreted while recognizing that the teacher variable was not controlled for in this analysis. Nonetheless, the data indicate that the Health Science program was not successful in this first year in producing higher achievement and learning *as measured by GPA*.

The beginning and end of the year writing sample results for the Health Science School students are also included in Table 2. These writing samples were graded by theme readers who were unaware of the program in which students participated, and are

a part of the regular writing program and requirements at Kent-Meridian. Scoring criteria and a more detailed description of the process are available from the school. Improvement in the student writing ability is reflected in the increased scores from 9.56 to 11.4, indicating that participation in the Health Science School program appeared to improve student writing performance. Unfortunately, an adequate end of the year writing sample was not obtained from the comparison group, and we cannot say how this growth would compare to students in the Health Science School. This is an area which should be evaluated in the next two years.

Table 2
Health Science Students and Comparison Group
Scores on Academic Outcomes

Academic Variable	Health Science Students	Other 10th Graders
First Semester GPA	2.52	2.28
Second Semester GPA	2.41	2.35
TOTAL Year GPA	2.46	2.32
Writing Sample Score -- Sept.	9.56	9.3
Writing Sample Score -- June	11.40	--

Table 3 provides a comparison of the attendance records and discipline referrals for the Health Science students and the comparison group of randomly selected tenth graders. These values indicate that the students in the Health Science School missed substantially less (49%) full days of school than did the comparison group students. For both groups of students the data were skewed to the right, meaning that the median score is the most appropriate value to use in comparing the groups. The median is the fiftieth percentile, or the midpoint, meaning that half the students are above and half are below this value. When students were in school, the Health Science students missed 26% fewer classes than did the students in the traditional program.

The discipline referral record shows that during the year only 12% of the Health Science students were referred to the school disciplinarians as compared to 41% of the comparison group students. This is a 71% decline in the discipline referral rate. The problems of attendance mentioned above is reflected in the reasons for referral. The actions taken by the disciplinarian show a marked difference in the three areas of suspensions, Saturday School and school service.

For the Health Science students there was a 61% lower referral rate to the

counselor. In contrast to the students in the traditional program, the Health Science students were referred here for inappropriate behavior, rather than to the disciplinarian. The action taken with these students generally involved parent conferences and student contracts, resulting in fewer suspensions, Saturday Schools, and service hours.

Table 3
Health Science Students and Comparison Group Discipline Referral and Attendance Records

	Health Science Students	Other 10th Graders
Absentee Record		
Full days absent	437	857
Average days absent	5.75	11.28
Median days absent	4.0	8.0
Average missed classes other than all day absences	15.1	20.32
Referrals		
School Disciplinarian		
Number of referrals	9 of 76 students (12%) 13 total referrals	31 of 76 students (41%) 81 total referrals
Reasons	truancy -- 5 inappropriate behavior -- 4 miscellaneous -- 4	truancy -- 33 inappropriate behavior-- 13 failure to comply -- 18 tardies -- 5 miscellaneous -- 12
Actions taken	suspensions -- 0 Saturday School -- 1 school service -- 38 hours	suspensions--15 for 76 days Saturday School -- 14 days school service --207 hours
School Counselor		
Number of referrals	12 of 76 students (16%) 22 total referrals	31 of 76 students (41%) 51 total referrals
Reasons	inappropriate behavior -- 15 academic -- 5 miscellaneous -- 2	inappropriate behavior -- 5 academic --24 miscellaneous -- 22
Actions taken	counselor, adm., parent conferences -- 19 performance contracts -- 20	counselor, adm., parent conferences -- 7 counselor conference -- 26 miscellaneous -- 18

Recognizing that educational research has clearly shown a relationship between parental involvement in the education of the child and student success in school, the Health Science teachers made concerted efforts to involve parents in this program. A parent council, information meetings, parent chaperons, and other activities were a part of the program. Remarkably, an evening parent meeting in March resulted in 54 parents in attendance. This aspect of the Health Science program resulted in 71% of the students having at least one parent participate or attend one program activity, meeting, or event.

Summary and conclusions.

Participation in the Health Science School did not result in higher grades for students and, in fact, may have resulted in a slight decline. However student writing samples indicate that the Health Science students did enhance their writing ability substantially. Health Science students had 49% fewer all day absences and by 26% fewer single class period absences. Discipline referrals to the school disciplinarians were down 71% and referrals to the counselor were down 61%. The need for suspensions and Saturday School was all but eliminated. Seventy-one percent of the students had some degree of observable participation in their child's education.

In the academic area as measured by GPA, Health Science School participation did not produce positive results during this first year. In the non-academic areas the results seem to be very dramatic and positive. While the data indicate that the students in the Health Science program might be slightly nonrepresentative of the general student population, the difference is not large and probably not enough to explain these different behavioral outcomes, particularly in attendance and behavior.

Question 3 -- How do the various groups (teachers, students, parents) perceive the program?

Sources of data.

An end of the year interview of the teachers was conducted to determine their perceptions of the program, its implementation, and its future. Parents were mailed a confidential questionnaire at the end of the year. Students completed an end of the year essay on their reflections of the school year.

Findings.

The interviews with the teachers and staff at the end of the year resulted in many diverse comments, but in general, there were several recurring themes.

1. Overall, the program has been a rewarding experience. While there were

frustrations at times, the teachers perceive it as a very positive experience professionally and remain committed to the belief that this is the proper direction for Kent-Meridian High School. Several commented that it has rejuvenated or prolonged their careers.

2. While there are areas within the program that need attention, such as classroom management and clearer student outcomes, they believe that participation in the program has greatly benefitted the students, particularly in the areas of problem solving, communication skills, and working cooperatively together.

3. The amount of time commitment for program implementation has been overwhelming. The teachers are very tired. In one teacher's words, "If I had known how much work it would be, I would not have participated." While this sentiment is the extreme among the teachers, it does reflect the amount of energy that the teachers put into this program.

4. There is a divergence of views about the future of the program and morale. Some doubt it will survive another year while others are guardedly optimistic. The degree of optimism aside, there were major concerns expressed by most or all of the teachers. The concerns centered around the following areas.

**Inadequate time for planning and communication. The teachers do not see the time and resources being provided by the district to develop the curriculum for next year and to train the new teachers who will be joining the program.

**Questions of leadership. The role of the principal and assistant-principal in the Health Science School for the coming year are not resolved. Without adequate leadership resources committed to the program, there is a fear that the program will dissolve.

**The apparent indifference of the district administration. This has left the teachers with questions about resources, resulting in a sense of uncertainty.

**"Sabotage" or undermining of the program from teachers at Kent-Meridian who do not want to change or who do not believe in the integrated program concept. This is particularly troublesome given the lack of commitment of resources and leadership to the program this next year.

The results of the parent questionnaire are presented in Table 4. Thirty-two questionnaires were returned for a return rate of 42%. An interpretation of these results, therefore, must be done cautiously because of this low return.

Of those parents responding, 81% to 94% of the parents agreed or strongly agreed with the statements which support the Health Science School. Ninety-four percent would

Table 4
Health Science School
Confidential Parent Questionnaire Results

1. My child seems to have a positive attitude about their school experience this year.

strongly agree	agree	disagree	strongly disagree	undecided
48%	**42%**	**3%**	--	**7%**

2. Participation in the Health/Sciences School has been beneficial to my child.

strongly agree	agree	disagree	strongly disagree	undecided
56%	**34%**	**6%**	--	**3%**

3. My child has demonstrated increased interest in school this year.

strongly agree	agree	disagree	strongly disagree	undecided
41%	**44%**	**13%**	--	**3%**

4. Participation in the Health/Sciences School has had a positive impact on my child's self-confidence.

strongly agree	agree	disagree	strongly disagree	undecided
47%	**34%**	**3%**	--	**16%**

5. Overall, I have been pleased with my child's educational program this year.

strongly agree	agree	disagree	strongly disagree	undecided
38%	**50%**	**3%**	**3%**	**6%**

6. I would recommend participation in the Health/Sciences School or similar program to others in the District.

strongly agree	agree	disagree	strongly disagree	undecided
56%	**38%**	**3%**	--	**3%**

7. If I had it to do over again, I would want my child in the Health/Sciences School.

strongly agree	agree	disagree	strongly disagree	undecided
63%	**25%**	**3%**	--	**9%**

recommend the program to others, and if given the choice again, 88% would put their child in the program. Positive comments on the questionnaire reflected this support, such as:

> "She [my child] has never been more involved and interested."
> "I think my son has taken a more responsible attitude toward School"
> "This program has been the best thing to happen to my child in all his years of school."

The comments of the small percentage of parents who were not supportive of the program generally indicated that they felt this way because the child had difficulty with a particular teacher, or because of unclear expectations and poor communication. However, as the data in Table 4 indicate, this was a very small percentage of students.

An analysis of a sample of end of the year essays by the students on their reflections of the school year shows that most view the year as a success, with the recognition that they were part of something special. They recognized that it took some major adjustments on their part, as they had to approach education from a very different perspective. There were some difficult times however, with the emphasis being on the need to improve communication of expectations between the teachers and students. Many commented on the close relationships they developed with their teachers and other students as a positive, but this also brought the down side of being removed from the rest of the student body. Many commented that they did not do as well as they would have liked with their grades, but that they had still learned a great deal, particularly about themselves and about others, and improved their self concept. Most liked the thrust of the Health Science program, but there were a few who felt that "it is not for me."

Summary and Conclusions.

The program generally received high marks from the participants. Teachers continue to believe that it is the direction for education to go and were generally satisfied in the programs progress. A very large percentage of the limited number of parents who responded were complimentary of the program, with 94% of the respondents saying they would recommend it to others, and 88% saying that if given the choice over again, they would choose to put their child into the program. Students also seemed satisfied with the year and the program. There are major concerns about the program, however, particularly in the areas of resources for planning and staff development, communication, leadership, and district commitment.

RECOMMENDATIONS

The history and pattern of educational innovation and change is typically one of initial excitement and success, followed by a cooling off period, and a gradual, sometimes abrupt, return to normalcy and traditional practices. At this point the long term success of the Health Science School, the school-within-a-school concept and the entire restructuring effort at Kent-Meridian High school is yet to be decided. This next year will be a critical year for the reform.

Success of the Health Science School to this point is attributable to a number of factors which have been shown to be necessary for successful change within a school (see appendix, A-3). First, the program is based on a number of research proven ideas and educational theories that enhance education. Parental involvement, a more personalized educational environment, and real world applications are just a few of the good ideas incorporated into this program. Second, there is a genuine commitment and ownership of the program on the part of the teachers, administration, and parents. It is clear that this was not a program forced on them, but one that was initiated and fostered by their interests. Third, there has been effective program leadership by building administrators who could make it all happen. Fourth, the teachers and administrators sought outside help when they recognized they lacked knowledge in particular areas. Fifth, there was a commitment of resources by the school and district to provide for the planning time necessary for a total revamp of the curriculum and for the needed outside expertise. Lastly, formative and summative evaluation strategies have been used to help keep the program on track and to keep people accountable.

At this point the Health Science School program must be considered to be a success, while there are areas that need to continue to be improved. The following recommendations are divided into two areas: (1) Recommendations to the Kent-Meridian/Kent School District Administration, and (2) recommendations to the Health Science School. In each case the recommendations reflect one of the above six characteristics of successful program implementation.

Recommendations to the Kent-Meridian/Kent School District Administration:

1. A clear signal should be sent to the Health Science faculty, and to the rest of the faculty at Kent-Meridian High School, that there is a continuing district and administrative commitment to the restructuring efforts, if this is indeed the plan.

2. Resources at the 1992-93 year level are necessary as a <u>minimum</u>. The program doubles in size during the next year, with a whole new group of teachers and students. It is not realistic to expect the program to succeed as it did this year without ample time for planning and curriculum development.

3. The leadership question of the Health Science School for 1993-94 must be resolved at the earliest possible date. A major reason for the success of the program this year was the strong leadership provided by the assistant principal. Without such leadership for the coming year, the program is in jeopardy. Even with the commitment of other resources, the program will struggle without strong leadership.

Recommendations to the Health Science School Faculty:

1. Curriculum development, the continued development of the integrated model, and the staff development of the new faculty in the School for the 1993-94 year should begin immediately. During the Summer of 1993 the existing and new faculty should evaluate which classroom and curricular practices were successful and which need revision.

2. The faculty must work at clarifying course outcomes, expectations, and timelines for students and communicate those clearly.

3. The faculty should continue the strong efforts at parent involvement.

4. The program evaluation efforts should continue and be expanded to include a satisfactory comparison group of students for writing samples, student attitude assessment toward subjects, and teacher attitude assessment toward their jobs.

APPENDICES

Brief CES Subscale Descriptions

Relationship Dimensions

1. Involvement — *measures the extent to which students have attentive interest in class activities and participate in discussions. The extent to which students do additional work on their own and enjoy the class is considered.*

2. Affiliation — *assesses the level of friendship students feel for each other, i.e., the extent to which they help each other with homework, get to know each other easily, and enjoy working together.*

3. Teacher Support — *measures the amount of help, concern, and friendship the teacher directs towards the students. The extent to which the teacher talks openly with students, trusts them, and is interested in their ideas is considered.*

Personal Development Dimensions

4. Task Orientation — *measures the extent to which it is important to complete the activities that have been planned. The emphasis the teacher places on staying on the subject matter is assessed.*

5. Competition — *assesses the emphasis placed on student's competing with each other for grades and recognition. An assessment of the difficulty of achieving good grades is included.*

System Maintenance Dimensions

6. Order and Organization — *assesses the emphasis on students behaving in an orderly and polite manner and on the overall organization of assignments and classroom activities. The degree to which students tend to remain calm and quiet is considered.*

7. Rule Clarity — *assesses the emphasis on establishing and following a clear set of rules, and on students knowing what the consequences will be if they do not follow them. An important focus of this subscale is the extent to which the teacher is consistent in dealing with students who break rules.*

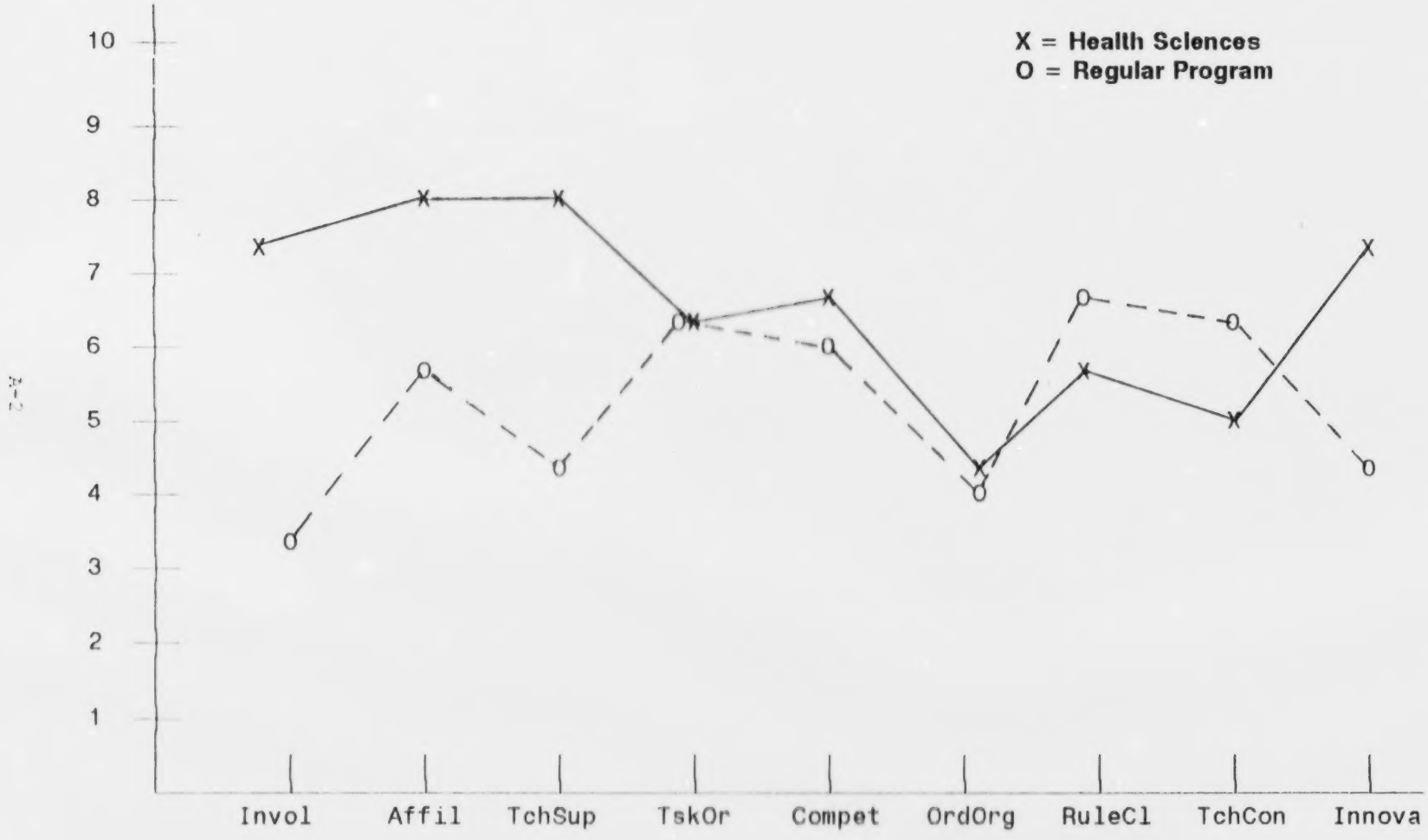
8. Teacher Control — *measures how strict the teacher is in enforcing the rules, and the severity of the punishment for rule infractions. The number of rules and the ease of students getting in trouble is considered.*

System Change Dimension

9. Innovation — *measures how much students contribute to planning classroom activities, and the amount of unusual and varying activities and assignments planned by the teacher. The extent to which the teacher attempts to use new techniques and encourages creative thinking in the students is considered.*

Classroom Environment Scale

Profile



Characteristics of Successful Program Implementation

The implementation of new educational programs in schools and districts is a frequent occurrence. Some programs are long-lasting, while others all swallowed up by the old way of doing things, or even collapse during the implementation process. Why are some schools and districts successful in implementing new programs, while other schools struggle with change or fail completely in their innovative efforts? Much of the success or failure of new programs is determined during the implementation process. Successful programs are noted by the following six characteristics. The degree to which any one or more of the characteristics is missing reduces the chances of success.

1. ***A commitment to change and the new program.*** Like all institutions, schools change reluctantly. The commitment to change must include a recognition that standard operating procedures are no longer satisfactory. Commitment and ownership must be present in the school board, administration, faculty, parents, and even students. Commitment must also include a willingness to change personnel if necessary.

2. ***A commitment of necessary resources.*** Few new programs succeed without considerable new resources, particularly during the implementation stage. The extent of the new resources needed is usually underestimated, but when used appropriately, will greatly enhance the chance of program success. When the resources are missing, program implementation will seldom happen in an effective manner.

3. ***Effective leadership.*** Ideally, this leadership will come from a highly respected person designated as the one "in charge" of the program, with release time appropriate for the assignment. With programs involving large numbers of teachers or schools, the leadership should come from the administrative level with authority to make decisions and with the personal ability to make things happen. The leader must truly believe in the program and be willing to accept responsibility for the outcome.

4. ***Expertise in appropriate areas.*** Personnel involved in the program must be knowledgeable about all aspects of the program and program implementation, *or* expertise must be available through the use of consultants for specialized areas.

5. ***Formative and summative program evaluation strategies.*** In the early stages of development, formal program evaluation strategies help to give focus to program goals. During the early stages of implementation, formal evaluation strategies identify what is working and not working, leading to program modifications to insure success. At the conclusion of the implementation stage, formal evaluation strategies serve as a report card of the program successes and failures. At all stages of implementation formal evaluation strategies insure that *accountability* is an important part of the program.

6. ***A program based on sound educational theory or research.*** A building is only as sound as its foundation, and the same is true of educational programs. No matter how great the commitment to the program and no matter how many resources are available, a program based on a bad idea will not last for long.